

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Bhavani Rayaprolu on 2/21/08.

The application has been amended as follows:

**Amend Specification on page 19 line 26:**

**Add** the word "readable" after computer before storage

**Amend Claims 1, 37, 38, 40, 41, 42, 44-46 and 62 as follow:**

1. A spam filtering system comprising:

a computer processor;

[[executing:]]

one or more spam filters;

and a randomization component that randomizes scores of the filters for one or more messages based at least in part upon a hash computed to randomize the message score, the hash is computed based at least in part upon one or more features extracted from the message whose

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respective individual contributions to the message score exceed a threshold, thus obfuscating the functionality of the spam filter wherein the spam filtering system making use of a sigmoid function having the formula of

$$finalscore = 1 / (1 + e^{-\wedge summedscore})$$

wherein at least one of the *summedscore* value or the *finalscore* value is randomized to effectively modify spammer behavior and to mitigate reverse engineering of the filtering system.

37. The [[method of claim 0]] computer readable storage medium of claim 35, wherein the *summedscore* is a sum of all scores associated with the one or more features extracted from a message.

38. The [[method of claim 0]] computer readable storage medium of claim 35, wherein the *finalscore* corresponds to a value between 0 and 1 that indicates a probability that a message is spam or not.

40. The [[method]] computer readable storage medium of claim 35, the number added to the score of the message depending at least in part upon at least one of the following:  
a time of day; and a time increment.

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41. The [[method]] computer readable storage medium of claim 35, the number added to the score of the message depending at least in part upon at least one of the following:

a user; a recipient of the message; a domain receiving the message; a domain of the sender; and a machine name running the filter.

44. The [[method]] computer readable storage medium of claim 35, wherein the features used to compute the hash can randomly or non-randomly change depending on at least one of a time of day and a time increment.

45. The [[method]] computer readable storage medium of claim 35, the number added to the score of the message depending at least in part upon a hash of a sender's IP address.

46. The [[method]] computer readable storage medium of claim 35, the number added to the score of the message depending on input from one or more input components.

62. A system that facilitates obfuscating a spare filter comprising:

a computer processor;

a means for running a message through a spare filter; a means for computing at least one score associated with the message; a means for randomizing the score of the message by modifying the score with at least one of a random number or a pseudo-random number, the number modifying

the score of the message depending at least in part upon a hash of at least a portion of one or more features extracted from the message having respective contributions to the score greater than zero; the score of the message comprises a *finalscore* score and a *summedscore* wherein the *finalscore* is a sigmoid function of the *summedscore* having the formula of

$$finalscore = 1 / (1 + e^{-summedscore})$$

wherein at least one of the *summedscore* value or the *finalscore* value is randomized before classifying the message as *spam* or *non-spam*; and a means for classifying the message as *spam* or *non-spam*.

#### ***Allowable Subject Matter***

2. Claims 1-13, 16-18, 35, 37-38, 40-42, 44-46, 59, 61-62 are allowed.

The following is an examiner's statement of reasons for allowance: The spam filtering system involves modifying at least one of the various scores associated with a message. This can be accomplished in part by randomizing either the *summedscore* or the *finalscore*, or both. by modifying the *finalscore* by adding or multiplying it by a random or pseudo-random number, the value of the *finalscore* effectively increases or decreases by some small amount such that when it is compared to some threshold, it may now exceed the threshold, whereas previously, it may have fallen below the threshold. Thus, the message could now be tagged as *spam* or potential *spam* due to the slight change in its overall score. Furthermore, The spam filtering system comprises a randomization component that randomizes scores of the filters for one or more

messages based at least in part upon a hash computed to randomize the message score, the hash is computed based at least in part upon one or more features extracted from the message whose respective individual contributions to the message score exceed a threshold, thus obfuscating the functionality of the spam filter wherein the spam filtering system making use of a sigmoid function having the formula of

$$finalscore = 1 / (1 + e^{-summedscore})$$

wherein at least one of the *summedscore* value or the *finalscore* value is randomized to effectively modify spammer behavior in combination with all the elements of each independent claim.

Examiner's amendment authorized by Applicant's representative placed the application in condition for allowance since the requisite functionality of hardware is present to satisfy the practical application requirement as supported by page 19, lines 29-32 of the specification and figure 8.

### ***Conclusion***

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DJENANE M. BAYARD whose telephone number is (571)272-3878. The examiner can normally be reached on Monday- Friday 5:30 AM- 3:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Patent Examiner

/William C. Vaughn, Jr./  
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